Navigation Program Area Review
December 5, 2005

James Clausner
ERDC Acting Technical Director

Navigation Systems Area
Business Line Leader: Barry Holliday

General Investigations-R&D

- Navigation Systems Continuing Program
- Navigation Economics Technologies
- Advanced Polymers

O&M-Funded

R&D Program

- Dredging Operations and Environmental Research
- Coastal Inlets Research

Non-R&D

- Monitoring Completed Navigation Projects
- Dredging Operations and Technical Support
- Inland Electronic Navigation Charting
- RSM Demo

Flood and Coastal Storm Damage Reduction
Business Line Leader: Harry Kitch

General Investigations-

R&D

- Flood and Coastal Storm Damage Reduction

Non-R&D

- Coastal Field Data Collection
- Urban Flood Demonstration Program
- Southwest Urban Flood Demonstration Program

CG

Non-R&D

National Shoreline Erosion Control Development and Demonstration - 227

O&M

Non-R&D

Innovative Flood Fighting (RDFW)

Supplemental

Shore Protection Project Performance Improvement Initiative (S3P2I)

R&D Leads at ERDC/IWR to Support CW Program

CW Board: Tom Richardson, CHL, Darryl Davis, IWR, Jeff Holland, ITL, Beth Fleming, EL, Joan Pope, ERDC

At Large TD's: Dave Moser, IWR, Mike Sharp, GSL, Darryl Calkins, CRREL

- **Navigation** – Sandra Knight, CHL
- **Flood & Storm Damage Reduction** – Jack Davis, CHL
- **Environmental Technologies** – Al Cofrancesco, EL
- **System-wide Technologies** – Dave Richards, ITL, John Barko, EL

Proposed Program - Navigation

- Navigation Systems $6,700
  - General Product Emphasis: improve efficiency, safety, and capacity of navigation and hydropower projects by integrating environmental, economic, and engineering aspects.
  - Focus Areas
    - Deep Draft $ 1,290
    - Inland $ 1,435
    - Hydropower $ 200
    - Nav Networks and Asset Mgt $ 3,045
      - Economic Technologies- Navigation Economic Technologies NETS ($2,425)
      - Risk and Reliability
      - Asset Management and Network Simulation

Proposed Program – Flood and Coastal

- Flood and Coastal Technologies $4,500
  - General Product Emphasis: balance water supply, hydropower operation, recreation, and flood and coastal storm damage reduction requirements. Effectively address all-hazards EM.
  - Focus Areas
    - Flood &Coastal Storm Damage $ 3,300
    - EM Technologies $ 750
    - Water Supply Technologies $ 200
    - Recreation

Proposed Program - Environmental

- Environmental Technologies $1,700
  - General Product Emphasis: ecosystems restoration, evaluation, and stewardship & management.
  - Major Subareas
    - Ecosystem Restoration $ 500
    - Stewardship & Management $ 440
    - Ecosystem Evaluation $ 400
    - Regulatory

System-wide Water Resources Program
Barko, Richards

- System-Wide Water Resources $9,100
  - Statement of Purpose: Support decisions that are scientifically, technically, and economically sound in formulating and executing sustainable system-level water resource projects.
  - Major Components
    - Regional Sediment $ 2,400
    - Regional Water $ 2,000
    - Ecosystem Assess/Forecast $ 2,100
    - Unifying Technologies $ 2,600

System-wide Water Resources Program
Ashby

- Regional Sediment Management
  - Sediment Management Methods
  - Sediment Process and Assessment
  - River Basin Morphology, Modeling, & Management
  - Coastal Morphology, Modeling, & Management

- Regional Water Management
  - Critical Water Processes
  - River and Estuarine Simulation
  - Watershed Hydrology Simulation
  - Coastal Simulation

System-wide Water Resources Program (cont.) Ashby

- Unifying Technologies
  - Geospatial Applications Development
  - Regional measurement & monitoring
  - Model integration
  - Frameworks
  - Decision support
  - Knowledge management
  - Data management
- Ecosystem Assess/Forecasting
  - Environmental Processes & Assessment
  - Ecological Modeling
  - Ecosystem Response Forecasting

Navigation Program Area Review Purpose

- Provide Status of navigation related direct allotted programs
- Provide forum for discussing navigation issues/needs

  Tomorrow

- Get programmatic feedback from HQ and MSC
- Discuss “hot” topics as well as strategic directions
- CoPs, PDTs, CX’s, RITs, etc. and how R&D fits
  - How to formalize PDT membership
- Determine best strategies for R&D product infusion
- Get input on research topics with additional funds